

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
1 September 2005 (01.09.2005)

PCT

(10) International Publication Number
WO 2005/080680 A1

(51) International Patent Classification⁷: **D21H 17/22, 21/18** (74) Agent: **WINCKELS, J.H.F.; Johan de Wittlaan 7, NL-2517 JR Den Haag (NL).**

(21) International Application Number:
PCT/NL2005/000120

(22) International Filing Date: 18 February 2005 (18.02.2005)

(25) Filing Language: **English**

(26) Publication Language: **English**

(30) Priority Data:
04075539.9 19 February 2004 (19.02.2004) EP

(71) Applicant (for all designated States except US): **NEDERLANDSE ORGANISATIE VOOR TOEGEËPAST-NATUURWETENSCHAPPELIJK ONDERZOEK TNO [NL/NL]; Schoemakerstraat 97, NL-2628 VK Delft (NL).**

(72) Inventors; and

(75) Inventors/Applicants (for US only): **SLAGHEK, Theodoor, Maximiliaan [NL/NL]; Schansweg 35, NL-3042 HT Rotterdam (NL). VAN WANDELEN, Mario, Tarcisius, Raymundus [NL/NL]; Rooseveltlaan 14, NL-3705 PG Zeist (NL). DROST, Willem, Cornelis [NL/NL]; Van Reenenweg 94, NL-3702 SM Zeist (NL). LO CASCIO, Dario, Maria, Rosario [—/NL]; Boomvalk 17, NL-1191 SB Ouderkerk aan de Amstel (NL). VAN WILLIGE, Remco, Willem, Godefridus [NL/NL]; Poortersveld 727, NL-7327 AS Apeldoorn (NL).**

(81) Designated States (unless otherwise indicated, for every kind of national protection available): **AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.**

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): **ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).**

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

A1

WO 2005/080680

(54) Title: **USE OF PROTEIN HYDROLYSATE DERIVED FROM KERATIN-CONTAINING MATERIAL IN THE WET-END OF A PAPERMAKING PROCESS**

(57) Abstract: The invention relates to the use of a protein hydrolysate derived from keratin-containing material as an additive in the wet-end of a papermaking process. The invention further relates to a process for making a paper pulp or paper product, and a paper pulp or a paper product comprising protein hydrolysate derived from keratin-containing material.